REMARKS

The application has been amended and is believed to be in condition for allowance.

Page 4 of the Official Action rejects claims 1-16 under Section 101 as being directed to non-statutory subject matter, in that the claims are said to fail to identify a concrete tangible result.

That some recitations may be directed to intangible results/actions is not a basis for rejection the claim. The analysis is whether the claim identifies a concrete tangible result. Thus, applicants respectfully disagree.

Claim 1 recites a learner-by-learner study menu ... that saves and presents study menu to a learner concerning a subject to be studied, a study material link information database that ... stores study material in the subject to be studied, and the learner-by-learner study menu generation server has a function of 2) presenting to the learner ... each of the plural selected study materials. These recitations are each believed to satisfy Section 101 as they recite concrete and tangible features of the invention.

Claim 12 has been amended to recite wherein said input study target level, input current states of the learner, and input gene information is stored in a database. The storage of information in a database is a concrete tangible result.

Claim 13 recites a storing step, i.e., "a study schedule document database generation step of a teacher's forming and storing a list of schedule tables in each of which an

effective study method for attaining each of study process purposes obtained by breaking down each study purpose is shown in such a manner that study materials are arranged in date order and study order". The claim also now recites displaying a schedule. The recited forming and storing of a list, as well as the display of a schedule are recitations believed to satisfy Section 101 as they recite concrete and tangible features of the invention.

Claim 14 recites accessing a study menu Web server via the access server and causing the learner terminal to <u>display</u> a learner schedule of a day. Causing the learner terminal to display a schedule is a recitation believed to satisfy Section 101 as they recite concrete and tangible features of the invention.

Claim 15 recites storing a modified schedule, and storing a change in contents. Claim 16 recites a first study guidance being stored on a server, a second study guidance being stored on the server, a third study guidance being stored on the server, and a forth study guidance being stored on the server. These are concrete tangible results.

Thus, the claims have been identified to include concrete tangible results, which identification overcomes the Section 101 rejection. Withdrawal of this rejection is solicited.

The previously-pending claims were rejected under Section 112, first paragraph, as containing subject matter not described in the specification so as to enable one skilled in the art to make and/or use the invention.

On page 2, the Official Action states that claims 1-16 include limitations which the disclosure does not teach how one skilled in the art would make the invention, i.e., growth stage identification is said to be disclosed but without identifying how one goes about identifying a "growth state" (sic) or what exactly is a growth state (sic).

See that claim 2 refers to time-distribution of selected study materials being based on the study "growth stage" (emphasis added):

"2) presenting to the learner, in a time-distributed manner, each of the plural selected study materials, the time-distribution being based on study growth stage of the learner, the study growth stage being determined as a function of scholastic ability based on study time in the subject, changes in the study characteristic, and a progress in transitioning to independent study." The basis for determining the growth stage of the learner is explicit in the claim itself.

Paragraph [0039] identifies Figure 8 as a flowchart relating to student' growth stages in the invention's system. Attention is also directed to paragraph [0048] which identifies an execution procedure relating to the student's growth stages. Claim 16 addresses these growth stages.

A first stage involves a teacher's providing first study guidance specifying study items and study materials at an initial stage where a study dependency is high and a study characteristic is high; at a second stage the teacher provides second study guidance by performing specification of study items

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and study materials as well as advising and motivating at a second stage where scholastic ability starts to increase and the study characteristic decreases; at a <u>third</u> stage the teacher provides third study guidance by performing only advising and motivating at a third stage where the scholastic ability increases and the study characteristic becomes unstable; and at a <u>forth</u> stage the teacher provides forth study guidance by performing only passive guidance at a final stage where the scholastic ability and the study characteristic increase.

Also see published paragraph [0015] disclosing providing study materials and a study menu suitable for a purpose of study by judging a growth stage of a learner <u>based on his scholastic ability and study characteristic</u>.

The concept of generating material based on the learner's growth state is discussed, at least in general terms, throughout the application. Paragraphs [0002-0014] discuss that in education, individual study according to each student's ability is considered ideal. The present invention allows a teacher, using the Internet, to provide study materials and a study menu by judging a growth stage of a student based on the student's scholastic ability and study characteristics (quality, traits concerning studying), paragraph [0015].

This includes, as per paragraph [0023], using a study history database comprising a student's i) current study schedule, ii) the study progress result, iii) a study characteristic extracted from the study progress result, iv) a

current degree of proficiency, v) study time, and vi) study execution process.

With respect to the limitation "proficiency of study information", see Figure 9. Also see that the specification teaches (paragraphs [0095-0099]) extracting 1) the student's "start of study" degree-of-proficiency-of-study information, 2) the study target from the learner database, 3) the student's study characteristic from the learner database, 4) determining basic study items of the learner based on the learner database, and 5) determining an amount of study and a study schedule. These result in an individual study schedule because study materials are determined based on the study target and a determined study schedule.

Reference is made to the disclosure beginning with paragraph [0129] and Figure 9 shows a learning curve of a learner This curve indicates a degree-of-proficiency-of-study calculation method based on which a study schedule as described above is generated. The degree of proficiency of study y is calculated according to y=ax+b, where a is the study characteristic that depends on interest, eagerness, attitude, and suitability determined by genes, x is the study time, and b is the degree of proficiency of study at the start of study. This curve is shown as a learning curve G6 in Figure. 9. The horizontal axis represents the study time G1 and the vertical axis represents the degree of proficiency of study G2. The origin corresponds to the start of study G3. The intercept is the degree of proficiency b

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at the start of study. A value f of an integral $\int y dx$ from 0 to x means an amount of study.

As to the phrase "study characteristic", see, for example, claims 5-6. Claim 5 recites (emphasis added) "a function of selecting study materials … based on a target level of the learner, a date when the target should be attained, a current degree of proficiency of the learner, and a <u>study characteristic of the learner</u> …." Next, see that claim 6 recites "that the <u>study characteristic</u> of the learner is <u>a characteristic that depends on presence/absence and a degree of interest in what the learner studies, a degree of eagerness of the learner about what the learner studies, a degree of attitude toward study, and suitability for what the learner studies that is determined by genes</u>."

See also paragraph [0021]: "The study characteristic of the learner is a characteristic that depends on presence/absence and a degree of interest in what the learner studies, a degree of eagerness of the learner about what the learner studies, a degree of attitude toward study, and suitability for what the learner studies that is determined by genes." Also see the disclosure concerning Figure 9, i.e., is the study characteristic that depends on interest, eagerness, attitude, and suitability determined by genes, x is the study time, and b is the degree of proficiency of study at the start of study.

The term "study dependency" is used in claim 16. This phrase is believed to be clear in context, i.e., "a teacher's providing first study guidance specifying study items and study

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materials at an initial stage where a study dependency is high and a study characteristic is high, the first study guidance being stored on a server;". Also see specification page 19, lines 17-24 (corresponding to paragraph [0123] "At an initial stage, the scholastic ability remains the same level and does not increase because of an insufficient study time. As for the study characteristic, the effectiveness of study is high because there are a number of unknown items, which is a feature found particularly in an initial stage of study. In terms of the transition process of independent study, the dependency of study is high because of low independency inherent in an individual and hence the social cost is high. As for the course of study guidance, a presentation method is mainly employed and it is necessary to specify a study item or a study material."

Applicants believe that these terms are well understood by those skilled in the art and that one of skill would be able to make and/or use the invention based on the application disclosure. Withdrawal of the rejection is solicited.

Claim 16 was additionally rejected as containing subject matter not described in the specification. That is, claim 16 recites multiple study guidances, whereas the Official Action states that the specification teaches only a single study guidance. Reference to Figure 8 and paragraphs [0121-0126] will show that the specification teaches multiple study guidances. Figure 8 shows growth stages of a learner. As per paragraph [0122], this shows a relationship between the scholastic ability for establishment of independent study, the study characteristic,

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and the course of study guidance as well as an independent study transition process.   See the clear disclosure that "The course of study guidance needs to be changed according to this process."

As per paragraph [0123] At an initial stage …. As for the course of study guidance, a presentation method is mainly employed and it is necessary to specify a study item or a study material. See paragraph [0124] At a second stage, …. Therefore, as for the course of study guidance, a support method is added… . Paragraph [0125] is for a third stage, …. Therefore, as for the course of study guidance, advising and motivating (support method) play a key role.   Finally, as per paragraph [0126], at a final stage, …. Therefore, the course of study guidance is establishment of independent study.

In each stage the specification refers to a different course of study guidance.   Therefore, claim 16 is of the same scope as disclosed by the specification.

Withdrawal of this rejection is solicited.

The claims have been amended in view of the Section 112, second paragraph rejection. Withdrawal of this rejection is solicited.

Substantive Rejections

The previously pending claims were all rejected as anticipated by COOK 5,727,950.

The amended claims are believed both novel and non-obvious.

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For the claims to be anticipated, each recited feature of the invention must be disclosed. The rejection only asserts that the general topics of the claims are disclosed by COOK. The present rejection does not assert that each recited feature of the claims is disclosed. Therefore, the Official Action does not make a *prima facie* showing of anticipation. Withdrawal of the anticipation rejection is solicited.

What COOK discloses is an Agent Based Instruction ("ABI") implemented on network connected computers (column 5, lines 12-17).

It is true that COOK teaches individualized student instruction. However, the claims are not only claiming merely individualized student instruction.

It is true that COOK discloses permanent student data being stored, i.e., in an object oriented database system (column 7, lines 50-55). However, this is not disclosure of the plural recited databases of the invention.

COOK does not disclose a study menu Web server, or a learner-by-learner study menu generation server that saves and presents a study menu to a learner concerning a subject to be studied. Although there is discussion in COOK of presenting educational content such as instruction units (column 10, lines 59-60), this disclosure is very general and does not satisfy the specific recitations of claim 1. For example, amended claim 1 recites the learner-by-learner study menu generation server has a function of

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1) selecting plural study materials in the subject to be studied according to predetermined selection criteria based on i) a target learning level for the learner, ii) a date when the target level should be attained by the learner, iii) a current degree of proficiency of the learner in the subject to be studied, and iv) a study characteristic of the learner, and

2) presenting to the learner, in a time-distributed manner, each of the plural selected study materials, the time-distribution being based on a present study growth stage of the learner, the present study growth stage being determined as a function of scholastic ability based on study time in the subject, changes in the study characteristic, and a progress in transitioning to independent study.

Claim 1 further requires the present study growth stages be defined by i) an initial first stage where a study dependency is high and a study characteristic is high, ii) a second stage where scholastic ability starts to increase and the study characteristic decreases, iii) a third stage where the scholastic ability increases and the study characteristic becomes unstable, and iv) a final forth stage where the scholastic ability and the study characteristic increase, and that a study schedule be based on a learning curve defined as y=ax+b, where 'a' is the study characteristic of the learner, 'x' is the study time of the learner, and 'b' is the degree of study proficiency at the start of study, and an amount of study required for the study schedule is determined as of the integral of the learning curve.

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The disclosure of these specific features of the invention is not found in COOK.

Accordingly, COOK does not anticipate claim 1.

Column 5, lines 45-54 of COOK have been offered as anticipating claim 6. Claim 6 recites that the study characteristic of the learner is a characteristic that depends on a degree of interest in what the learner studies, a degree of eagerness of the learner about what the learner studies, a degree of attitude toward study, and a genetic suitability for what the learner studies. Lines 45-54 of COOK disclose agent behaviors adapt to the student based on a variety of information about the student and a growing history of interactions with the student. This passage is only a general teaching and does not mention the student's degree of interest, the student's degree of eagerness, the student's degree of attitude, or genetic suitability. Accordingly, claim 6 cannot be said to be anticipated.

With respect to claim 7, the Official Action offered COOK column 29, lines 7-9 as teaching databases containing all the necessary information for determining study plans. Lines 7-9 read: "2. Task sequencing suggestion responses, which suggest an order of assigned tasks based on student history and on the assigned priority and deadline." Again, this is only a general statement.

Claim 7 actually requires that the learner database is a database formed by a target study level, a date when the target study level is scheduled to be reached, a name of the learner, an address of the learner, a telephone number of the learner, a FAX

number of the learner, an e-mail address of the learner, a school or some other party to which the learner belongs, a position of the learner in the school or the party, recent results of the learner, a name of a protector of the learner, genetic information of the learner, and degree-of-proficiency-of-study information. To anticipate, each of these elements must be disclosed. Clearly, this passage of COOK does not disclose each recited element and therefore there is no anticipation.

As to claim 8, COOK column 56, lines 26-30 were offered. These lines are part of a paragraph that illustrates "a generic policy filter rule." The entire paragraph discloses agent behavior, for example, "congratulate the student," and the subtype modifies that behavior, for example, "because of the student's rate." The parameters provide additional information to be used in constructing an utterance, for example the time that the student took to complete an item or the name of the item. Thus, this passage of COOK refers to constructing feedback (auditory) to the student. That is not the recitation of claim 8.

In contrast, claim 8 requires that the learner study history database be formed by a current study schedule of the learner, a study progress result of the learner, a study characteristic that is extracted from the study progress result of the learner, a current degree of proficiency of study, a study time of each study, and a study execution process. The elements recited by claim 8 are not found in the COOK passage. Therefore, there is no anticipation.

For claim 9, the Official Action offers COOK Figure 7, Materials Engine and column 38. Figure 7 relates to system processing of an input event. However, Figure 7 and column 38 are not found to disclose a study material link information database formed by study material link information by study items, study material link information by study targets, and study material useful link information, and is used in selecting a study schedule document of the learner. Without identification of these recited items, there is no disclosure.

As to claim 1 and its dependent claims, the COOK disclosure is only generally related to the subject matter claimed. There is no disclosure of the specific features being recited, taken as a whole. Therefore the anticipation rejection should be withdrawn and the claims allowed.

Claims 12-16

Amended claim 12 requires the learner inputting a study target level, current states of the learner, and gene information of the learner. The learner making this input was not identified as part of the rejection and applicants do not see that COOK makes this disclosure. Further, COOK is not found to teach the study growth stages as recited.

Amended claim 13 requires a step of extracting degree-of-proficiency-of-study information of a learner at a start of study from a learner database. Although COOK is offered for the using the student's progress on previous tasks to make changes and update information, there is no disclosure of the "start of

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study" degree of proficiency extraction. There is also no disclosure of the recited a step of determining an amount of study and a study schedule of the learner based on the learner database, and the step of calculating a learning curve as a integral of the extract degree-of-proficiency-of-study information and an amount of study time.

Claim 14 appears to be rejected over COOK presenting materials based on the student's progress with previous work. This general disclosure is insufficient to anticipate the claim 14 recitations.

COOK does not teach the recitation of learner study materials presented to the learner in a time-distributed manner based on a study growth stage of the learner, the study growth stage being determined as a function of scholastic ability based on study time in the subject, changes in the study characteristic, and a progress in transitioning to independent study. See the added recitations of the study growth stage being defined by i) an initial first stage where a study dependency is high and a study characteristic is high, ii) a second stage where scholastic ability starts to increase and the study characteristic decreases, iii) a third stage where the scholastic ability increases and the study characteristic becomes unstable, and iv) a final forth stage where the scholastic ability and the study characteristic increase. These are not disclosed.

Claim 15 addresses a particular learning situation. The passages of COOK offered by the Official Action do not teach the steps recited by claim 15.

COOK does not teach that when a reporting date of study results is later than a preset deadline, a learner-by-learner study schedule generation server modifying a schedule in accordance with a deadline. Nor does COOK teach that when a late result reporting has occurred plural times, changing one or a combination of contents of study materials, the study schedule, and the teacher.

Although COOK is offered for adapting based on student performance, there is no disclosure of the specific steps of claim 16. COOK does not teach four different stages with the recited characteristics.

There is no anticipation without disclosure of: 1) first study guidance at an initial stage where a study dependency is high and a study characteristic is high; 2) second study guidance, additionally including advising and motivating at a second stage where scholastic ability starts to increase and the study characteristic decreases; 3) third study guidance by performing only advising and motivating where the scholastic ability increases and the study characteristic becomes unstable, the third study guidance being stored on the server; and 4) forth study guidance by performing only passive guidance at a final stage where the scholastic ability and the study characteristic increase.
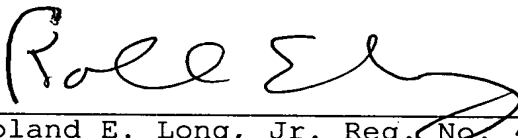
For the above reasons, each of the claims is also believed allowable.

Applicants believe that the present application is in condition for allowance and an early indication of the same is respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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